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10/037,366	01/04/2002	Steven Turner	1376.0200130	6465

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EXAMINER	
NGUYEN, HAU H	

ART UNIT	PAPER NUMBER
2676	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/037,366	Applicant(s) TURNER ET AL.	
	Examiner Hau H Nguyen	Art Unit 2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 recites the limitation "embedded controller". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-8, 11-26, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Bril et al. (U.S. Patent No. 6,188,413).

Referring to claims 1, 6, 7, and 11, Bril et al. teach a video controller integrated circuit simultaneously generates CRT and LCD display signals for CRT and LCD video displays having independent refresh rates and pixel resolutions (col. 4, lines 32-36). As shown in Fig. 6, Bril et al. further teach it may be desirable to use both internal LCD displays (an integrated display) and external CRT displays (remote display) when in a "docked" position or connected to an external CRT (an interface to integrated display) (col. 13, lines 13-20). As shown in FIG. 2, two separate

data paths may be provided for generating two independent video images on separate video displays. A first data path (embedded display interface) may be used to generate a display signal (a second rendered graphics data) to drive a CRT, television, or the like (col. 7, lines 40-47). A separate data path is provided in the apparatus of FIG. 2 for LCD data (col. 8, lines 26-30), wherein LCD FIFO 231 and LCD video data path 232 may be under control of LCD controller 234 which may provide sequence control to process data from LCD FIFO 231 through LCD video data path 232. LCD FIFO 231, LCD video data path 232, and LCD controller 234 (an embedded graphics controller) may be driven by LCD clock 236 driven at a frequency characteristic of the output video display (col. 8, lines 54-61). Data from LCD video data path 232 may then be passed to RAM 233, the output of RAM 223 may then pass to dither control 235. The output of dither control 235 (an interface to the integrated display) may be used to drive an active matrix type LCD display such as thin-film transistor (TFT) display 280 (col. 8, lines 62-67, and col. 9, lines 1-23). Thus, the LCD controller 234 generates a first rendered graphics data to be displayed on the integrated display 280.

In regard to claim 2, with reference again to Fig. 2, Bril et al. teach CRT FIFO 221 and CRT video data path 222 may be under control of CRT controller 224 (a display controller) which may provide sequence control to process data from CRT FIFO 221 through CRT video data path 222 (col. 7, lines 58-61).

As for claim 3, as shown in Fig. 2 and as cited above, data input to the LCD controller 234 is not dithered or shaded (non-rendered) until it is passed to the dither controller 235 or the shade controller 237.

In regard to claim 4, Bril et al. teach in other types of dual displays, where refresh rates and resolutions of both displays are identical, CRT and LCD data may be diverted to appropriate data paths merely by counting the number of words diverted to each data path. For example, a number of read cycles may be performed for CRT data, followed by an identical number of read cycles for LCD data. If both displays have the same resolution and refresh rate, such counting techniques may be readily implemented (col. 12, lines 57-64). Therefore, as case where the remote display is an LCD display, the common data path as shown in an alternate embodiment in Fig. 6 can provide LCD data (a first rendered graphics data) to a (second) remote (LCD) display.

Referring to claim 5, as shown in Fig. 6, Bril et al. teach a sequence controller 696 for reading data from memory 620 using control signals (EMPTY or FULL) of the respective CRT and LCD FIFOs 681 and 682 in order to generate display data to respective display interface of the displays (col. 12, lines 45-53).

In regard to claim 8, Bril et al. further teach CRT controller 224 of Figure 2 may generate a number of VGA compatible signals for a CRT such as known in the art such as Horizontal Display Enable (HDE) Vertical Display Enable (VDE), HSYNC, VSYNC, Line Compare, Underline and Cursor On Line (col. 9, lines 55-59).

As for claim 12, with reference again to Fig. 2, it is inherent that when a remote display (display 292, for example), is not connected, the CRT data path is disabled.

Referring to claims 13-25, and 29, as cited above and as shown in Fig. 2, Bril et al. teach a processor 210 for use in a portable laptop computer having internal LCD displays and external CRT displays, coupled to the display memory 220 and receiving two separate data paths may be provided for generating two independent video images on separate video displays from output

bus 230. A first rendered graphics data generated by the LCD controller 234 to the integrated TFT (thin film transistor) LCD display 280, and a second set of graphics is provided to a remote CRT display.

In regard to claim 26, as cited above, Bril et al. teach the remote display can include a VGA display.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 9-10, 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bril et al. (U.S. Patent No. 6,188,413) in view of Narui et al. (U.S. Patent No. 6313813).

Referring to claims 9-10, 27-28, as applied to claims 1 and 25 above, Bril et al. teach all the limitations of claims 9-10, 27-28, except for the display interface includes a Transition Minimized Differential Signaling output interface or a Low Voltage Differential Signaling output interface.

However, Narui et al. teach a converter resides in the monitor having display signals transmitted by the PC to the monitor in digital form. A receiver is incorporated as part of the display data input of the monitor and receives the digital display signals and forwards them to the converter. In the preferred embodiments, the receiver is one of a transition-minimized

differential scaling (TMDS) receiver, a low voltage differential signaling (LVDS) receiver (col. 2, lines 62-67, and col. 3, lines 1-5).

Therefore, it would have been obvious to one skilled in the art to utilize the method of receiving different input signals for a display as taught by Narui et al. in combination with the graphics system as taught by Bril et al. in order to allow the display devices having display circuits that output display signals at a variety of different scanning frequencies and display resolutions (col. 1, lines 60-63).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 703-305-4104. The examiner can normally be reached on MON-FRI from 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 703-308-6829.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

H. Nguyen

02/12/2004

Matthew C. Bella

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
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